

§ 125.143 Firewalls.

Each engine, auxiliary power unit, fuel-burning heater, or other item of combustive equipment that is intended for operation in flight must be isolated from the rest of the airplane by means of firewalls or shrouds, or by other equivalent means.

§ 125.145 Firewall construction.

Each firewall and shroud must—

- (a) Be so made that no hazardous quantity of air, fluids, or flame can pass from the engine compartment to other parts of the airplane;
- (b) Have all openings in the firewall or shroud sealed with close-fitting fireproof grommets, bushings, or firewall fittings;
- (c) Be made of fireproof material; and
- (d) Be protected against corrosion.

§ 125.147 Cowling.

(a) Cowling must be made and supported so as to resist the vibration, inertia, and air loads to which it may be normally subjected.

(b) Provisions must be made to allow rapid and complete drainage of the cowling in normal ground and flight attitudes. Drains must not discharge in locations constituting a fire hazard. Parts of the cowling that are subjected to high temperatures because they are near exhaust system parts or because of exhaust gas impingement must be made of fireproof material. Unless otherwise specified in these regulations, all other parts of the cowling must be made of material that is at least fire resistant.

§ 125.149 Engine accessory section diaphragm.

Unless equivalent protection can be shown by other means, a diaphragm that complies with § 125.145 must be provided on air-cooled engines to isolate the engine power section and all parts of the exhaust system from the engine accessory compartment.

§ 125.151 Powerplant fire protection.

(a) Designated fire zones must be protected from fire by compliance with §§ 125.153 through 125.159.

- (b) Designated fire zones are—
 - (1) Engine accessory sections;

(2) Installations where no isolation is provided between the engine and accessory compartment; and

(3) Areas that contain auxiliary power units, fuel-burning heaters, and other combustion equipment.

§ 125.153 Flammable fluids.

(a) No tanks or reservoirs that are a part of a system containing flammable fluids or gases may be located in designated fire zones, except where the fluid contained, the design of the system, the materials used in the tank, the shutoff means, and the connections, lines, and controls provide equivalent safety.

(b) At least one-half inch of clear airspace must be provided between any tank or reservoir and a firewall or shroud isolating a designated fire zone.

§ 125.155 Shutoff means.

(a) Each engine must have a means for shutting off or otherwise preventing hazardous amounts of fuel, oil, de-icer, and other flammable fluids from flowing into, within, or through any designated fire zone. However, means need not be provided to shut off flow in lines that are an integral part of an engine.

(b) The shutoff means must allow an emergency operating sequence that is compatible with the emergency operation of other equipment, such as feathering the propeller, to facilitate rapid and effective control of fires.

(c) Shutoff means must be located outside of designated fire zones, unless equivalent safety is provided, and it must be shown that no hazardous amount of flammable fluid will drain into any designated fire zone after a shutoff.

(d) Adequate provisions must be made to guard against inadvertent operation of the shutoff means and to make it possible for the crew to reopen the shutoff means after it has been closed.

§ 125.157 Lines and fittings.

(a) Each line, and its fittings, that is located in a designated fire zone, if it carries flammable fluids or gases under pressure, or is attached directly to the engine, or is subject to relative motion between components (except lines and